BS

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,816	08/15/2001	Dominik J. Schmidt	AIRIFY014	2398

38236 7590 10/21/2004

DOMINIK J. SCHMIDT
P.O. BOX 20541
STANDFORD, CA 94309

EXAMINER	
HO, TUAN V	

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/930,816	SCHMIDT, DOMINIK J.	
	Examiner	Art Unit	
	Tuan V Ho	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-29 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-29 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 15 August 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. Claims 1, 8-16 and 18 are objected to because of the following informalities:

Claim 1 recites the limitations "the film cavity" in line 1 and "the shutter aperture" in lines 3-4. There is no antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the output port" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the output port" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the output port" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the output port" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the external device" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "the external device" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the output port" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "the output port" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the output port" in lines 1-2. There is no antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the shutter aperture" in line 3. There is no antecedent basis for this limitation in the claim.

Appropriate correction is required.

3. Claims 19 and 21-29 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 19 and 21-29 are method claims which

improperly depend on the apparatus claim 17.

Noted that dependent claims 19 and 21-29 should depend from claims 18.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

Claims 1-8, 10-13, 17-24, 26 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Cronin et al cited by Applicant (US 5,561,458.)

Regarding claim 1, Cronin et al discloses a digital camera that fits with the film cavity of a non-digital camera (electronic imaging module 20 is inserted into a film supply chamber 17 of camera 10, Figs. 1A and 1B, col. 5, lines 3-20) comprising the light detector (Figs. 4A & 4B, photodiode 70

detects light due to the opening of shutter 16, col. 9, line 37 to col. 10, line 31; noted that module 20 can be arranged as shown in Fig. 4A and 4B; where the difference between them is a wire link and wireless link); an imager coupled to the light detector for and located adjacent to the shutter aperture (image sensor 40 is coupled to photodiode 70 via microprocessor 30, Fig. 4A; photodiode70 is located on supporting circuitry 28 that is behind shutter 16), and imager sensing radiated energy reflective image of the image received through a lens and a shutter aperture of the non-digital camera and generating signals reflective image (after shutter 16 is actuated, image sensor 40 receives reflective light of an object and converts the image light into electrical signal, Figs. 4A-4B, col. 9, line 32 to col. 10, line 31).

Regarding claim 2, Cronin discloses a digital camera that comprises the memory for storing digital data reflective of the image (Fig. 4A, storage unit 33, col. 5, lines 49).

Regarding claim 3, Cronin discloses a digital camera that comprises the passgate coupled to the light detector (a combination of comparator 72 and microprocessor 30 is located between image sensor 40 and system timing circuit 54(Fig. 4A, col. 9, lines 33-67), and passgate controlled by the light detector such that when the light detector detects light due to

the opening of the shutter aperture, the passgate is switched to permit clock signals to reach the imager (when photodiode 70 detects the light intensity is increased, comparator 72 working in combination with microprocessor 30 is switched to permit timing unit 54 to drive image sensor 40, col. 7, lines 49-52 and col. 9, lines 32-68; col. 10, lines 47-65).

Regarding claim 4, Cronin discloses a digital camera that comprises the light detector controlling power supplied to the imager (light detector 70 inherently controls power to the imager 40 via microprocessor 30, col. 10, lines 47-55).

Regarding claim 5, Cronin et al discloses a digital camera that comprises the light detector controlling the output from the imager such that when the light detector detect light due to the opening of the shutter aperture, output signals of the imager are outputted (col. 9, lines 32-68 and col. 10, lines 47-65).

Regarding claim 6, Cronin et al discloses a digital camera that comprises the circuitry for performing signal processing on the output from the imager (VSP 44, A/D 48 and processor 30, Figs. 4A or 4B, col. 7, lines 4-45).

Regarding claim 7, Cronin et al discloses an output port for outputting image data from the digital camera to an external device (Fig. 4A, wire link 50 includes an output for outputting image signals to an external device).

Regarding claim 8, Cronin et al discloses a digital camera that comprises the output port comprising a wireless transmitter for transmitting image data to wireless receiver device of an external device (module 20 can be arranged as shown in Fig. 4B; wherein the output port is a wireless link 32 including a wireless transmitter inherently providing wireless signals to a wireless receiver of an external wireless device, col. 7, lines 35-52).

Regarding claim 11, Cronin et al discloses that the output port wirelessly coupled to a monitor (Fig. 6, col. 10, lines 66-67 and col. 11, lines 1-13) and the digital camera further comprises a circuitry that drives the monitor to display the image on the monitor (digital camera 10 transmits a formatted signals that is used by control unit 76 including monitor 80; therefore, digital camera 10 must inherently include a circuit that provide the formatted signals to control unit 76 and inherently drive the monitor so as to display an image thereon).

Regarding claim 12, Cronin et al discloses control unit 76 including driving circuits to drive monitor 80 so as to display an image (col. 11, lines 1-13).

Regarding claim 13, Cronin et al further discloses in Fig. 8 that the external device drives a printer for printing the image

(module 20 is connected to base unit 78 that can control printer 96 or display 98, col. 11, lines 40-57).

Regarding claim 17, Cronin et al discloses in Fig. 2B a digital camera that comprises the lens (lens 64) located between the shutter aperture (16) and the imager (40) for focusing the image though the shutter aperture on the imager (40) (Fig. 2A) (col. 4, lines 33-46; col. 8, line 50 to col. 9, line 8.)

Method claims 18, 22, 23, 24, 26 and 29 correspond to apparatus claims 1, 6, 7, 11, 13 and 8, respectively and are analyzed as previously discussed with respect to apparatus claims 1, 6, 7, 11, 13 and 8.

Regarding claims 19-21, Cronin et al further discloses the steps of translating the signals to digital data, formatting the digital data into data word, and storing the digital data (col. 11, line 58-67 and col. 12, line 1-13).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter

as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cronin et al (US 5,561,458) in view of Sapir cited by Applicant (US 5,282,040).

Regarding claim 9, Cronin et al discloses the same subject matter discussed with respect to claim 1; furthermore, Cronin teaches that the output port is coupled a wire link (Fig. 4A) and transmits the image signal to an external device. However, Cronin does not explicitly disclose that the cable is a flat cable.

In the same field of endeavor, Sapir discloses a digital camera that fits with a film cavity of a non-digital camera (Figs. 1 & 4). Sapir also teaches that a flat cable is used to output signals of the digital camera to an external device (column 3, lines 55- 60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the wire link of Cronin with a flat cable as taught by Sapir so as to obtain a flat cable at the rear door when the door is closed and connects to an external device. That is because the substitution of the wire link of Cronin with a flat cable of Sapir would allow the opening and closing of camera

door easily without any damaging to the connecting wire due to the flatness of the cable.

Regarding claim 10, Cronin et al discloses the same subject matter as discussed with respect to claim 6, except that the output port outputs image in a format compatible with the RS-232 standard.

Furthermore, Cronin et al discloses that the electronic imaging module 20 and the control unit 76 can operate in conjunction with a PCMCIA card 108 and a personal computer 110 (Fig. 12.) Cronin et al teaches in column 13, lines 22-32 that the communication link 112 could be an electrical wire, a mechanical connector or a physical connector, which interfaces with a compatible communication port provided in the digital camera 10. Official Notice is taken that a PCMCIA card is capable of interfacing a variety of storing medium to a wide range of microprocessors via 8- or 16-bit data paths and computers inherently includes RS-232 interface port. Thus, it is inherent that the camera outputs image in a format compatible with the RS-232 standard so that images can be inputted into personal computer 110.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the module 20 of Cronin et al as shown in Fig. 4A as the same

fashion of module 20 as shown in Fig. 12 so as to obtain the output port outputting image in a format compatible with the RS-232 standard since the modification of the module 20 would allow a user easily and conveniently to communicate with an external device via a standard format.

6. Claims 14 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cronin et al in view of Parulski et al cited by Applicant (US 5,666,159).

Regarding claim 14, Cronin et al discloses the same subject matter as discussed with respect to claim 6, except that the output port operates in accordance with a telephone standard and fails to teach a logic to generate a facsimile transmission that is output through the output port to a coupled telephone line.

In the same field of endeavor, Parulski et al teaches a still camera having a logic to generate a facsimile transmission from the output port of the still camera to a telephone line (Fig. 7, 8 & 11, col. 4, line 26 to col. 5, line 13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Cronin module as the same fashion as disclosed by Parulski in order to obtain a facsimile transmission in accordance with a telephone standard thereby providing a camera user more

accessible means in selecting a destination for transmitting the image data from the digital camera.

Method claim 25 corresponds to apparatus claim 14 and is analyses as previously discussed with respect to the apparatus claim 14.

7. Claims 15-16 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cronin et al in view of Sprague cited by Applicant(5,699,458).

Regarding claims 15 and 16, Cronin et al discloses the same subject matter as discussed with respect to claim 6, except that the output port is coupled to the Internet and World Wide Web as recited in claims 15 and 16.

Cronin et al does not explicitly disclose any Internet and World Wide Web as recited in claims 15 and 16. However, it is noted that transmitting still image data to the internet or/and world wide web is well known in the art as taught by Sprague (col. 1, lines 1055; col. 4, lines 42-62).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the Cronin digital camera with Sprague by coupling the output port of the Cronin camera to the internet or/and an world wide web thereby

providing alternative means for a user in transmitting the image data produced by the digital camera to a selected destination.

Method claims 27-28 correspond to apparatus claims 15-16, respectively. Therefore, claims 27-28 are analyzed as previously discussed with respect to apparatus claims 15-16.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer

signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 and 25-36 of U.S. Patent No. 6,278,481. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Regarding claim 1, patent claims 1 or 24 discloses the claimed digital camera (a digital camera fits within a film cavity of a non-digital camera), light detector (a light detector), and imager (an on-chip CMOS imager).

Regarding claim 2, patent claim 1 discloses the memory (an on-chip CMOS memory array).

Regarding claim 2, claim 2 does not recite a random access memory or flash memory as claimed in patent claim 27. However, It would have been obvious to one of skill in the art at the time the invention was made to modify the memory of claim 2 to be a random access memory or flash memory since they are standard memories which are readily available on the market.

Regarding claim 3, patent claim 2 discloses the passgate (a passgate), clock input (clock input) and the passgate controlled by the light detector(said passgate controlled by the light detector).

Regarding claim 4, patent claim 3 discloses the light detector controls power (light detector controls power).

Regarding claim 5, patent claim 4 discloses the light detector (the light detector).

Regarding claim 6, patent claims 9 or 29 discloses the circuitry for performing signal processing (the processor).

Regarding claim 6, claim 6 does not recites any image processing performing edge detection (patent claim 30) or image sharpening (patent claim 31). However, edge detection and image sharpening processing are old and well know in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the processor of claim 6 to perform edge detection and image sharpening processing because the edge detection and image sharpening would allow a user to improve the image quality and thereby to provide better image details on a monitor display.

Regarding claim 7, patent claim 13 discloses the output port (one output port).

Regarding claim 8, patent claim 14 discloses the output port comprises a wireless transmitter (one output port).

Regarding claim 9, patent claim 15 discloses the substantially flat cable (a substantially flat cable).

Regarding claim 10, patent claim 16 discloses the format compatible with the RS-232 standard (format compatible).

Regarding claim 11, patent claims 17 discloses the monitor and circuitry (a monitor and circuitry).

Regarding claim 12, patent claim 18 discloses the external device (the external device drives a monitor).

Regarding claim 13, patent claim 19 discloses the external device (the external device drives a printer).

Regarding claim 14, patent claim 20 discloses the output port (the output port operates in accordance with a telephone standard) and facsimile transmission (a facsimile transmission).

Regarding claim 15 patent claim 21 discloses the Internet (the Internet).

Regarding claim 16, patent claim 22 discloses the World Wide Web (the World Wide Web).

Regarding claim 17, patent claim 9 discloses the lens (the lens).

Method claims 18 and 22-29 correspond to apparatus claims 1, 6, 7, 11, 14, 13, 15, 16 and 8 and are analyzed the same as previously discussed with respect to apparatus claims 1, 6, 7, 11, 14, 13, 15, 16 and 8.

Regarding claim 19, patent claim 1 discloses the digital data (the digital data).

Regarding claim 20, patent claim 1 discloses the step of formatting the signals reflective of the digital image sensed into data words (the on-chip processor inherently formats the signals into compressed digital signals and stores the signals in a CMOS memory under data words).

Regarding claim 21, patent claim discloses the steps of storing in memory (the digital camera stores image signals in an on-chip high density CMOS memory).

Regarding claim 7, patent claim 32 discloses the output port (the output port)

Regarding claim 8, patent claim 33 discloses the output port (output port).

Regarding claim 10, patent claim 34 discloses the format compatible with the RS-232 (computer compatible format).

Regarding claim 14, patent claim 35 discloses the at least one output port (the output port).

Regarding claim 16, patent claim 36 discloses the output port (the output port couples to a World Wide Web).

Method claims 18 and 22-29 correspond to apparatus claims 1, 6, 7, 11, 14, 13, 15, 16 and 8 and area analyzed the same as previously discussed with respect to apparatus claims 1, 6, 7, 11, 14, 13, 15, 16 and 8.

Regarding claim 19, claim 19 correspond to apparatus claim 2 and is analyzed the same as discussed with respect to claim 2.

Regarding claims 20 and 21, patent claim 1 recites the formatting the signals (A/D converter converts the signals into digital compressed signals and inherently stores in a memory as data word).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN HO whose telephone number is (703) 305-4943. The examiner can normally be reached on Mon-Fri from 7AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen, can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

TUAN HO

Primary Examiner

Art Unit 2615